



03.07.13

# A Renovation to 480 Grand

## Phase 1





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## **Project Description**

The scope of exterior modifications to the exterior of 480 Grand Hill consist of the following:

- 1) Converting a First Floor Rear Screen Porch into a Three Season Porch
- 2) Remodel and replace existing Second Floor Screen Porch
- 3) Replace screens on First Floor Kitchen-Porch
- 4) Replacement of the skylights over the Solarium and third floor halls
- 5) Repair and Replace Exterior Doors and Windows

### **Rear Screen Porch**

Based on review of the original architectural plans dated August 15, 1908 and visual inspection of the existing structure, this area is not authentic to the home. Whitney's plans show no structure in the current location of the existing screen porch. Brick pattern and mortar color does not match the rest of the home. We are proposing the following changes within this area:

- Removing the dilapidated screens and replacing them with security glass doors and transom windows that match other doors and windows on the home.
- Removing of the Indiana Limestone balusters and reusing them in locations of the home where other balusters are in severe disrepair.
- The addition of a new masonry fireplace that will occupy the center bay of the East screened openings. All materials and detailing will match the existing architecture.
- Adding Bluestone pavers on the existing concrete slab floor and extending it to cover the adjacent outdoor Terrace.
- For security purposes, removing the plywood basement hatch door that covers a portion of the screened openings.
- Removing the downspout in the South-East interior corner. This was part of modifying the exterior balcony above some time ago.





## **Second Floor Screened Porch**

Based on review of the original architectural plans dated August 15, 1908 and visual inspection of the existing structure, this area is not authentic to the home. Whitney's plans show no structure in the current location of the existing second floor screen porch. Brick pattern and mortar color does not match the rest of the home. In addition, a further modification was done to convert an exterior balcony (South facing) into additional screened area. This portion has a shed roof intersecting the flat roof portion of the second floor porch. We are proposing the following changes within this area:

- Removing and replacing the dilapidated screens and adding storm windows.
- Re-tuck point previous brick repair.
- Removing the two roof structure and replacing it with a new flat roof that matches the existing flat portion. All materials, detailing, brackets, etc. will match the existing features on the home.
- Adding Bluestone pavers on a pedestal system over the existing floor.
- Removing the downspout in the South-East interior corner. This was part of modifying the exterior balcony some time ago.
- Adding a door in the current location of a window in the Guest Bedroom. This will give access and egress to that bedroom.

## **Kitchen Screen Porch**

Based on review of the original architectural plans dated August 15, 1908 and visual inspection of the existing structure, this area has been previously modified from a covered porch to a screened porch. We are proposing the following changes within this area:

- Removing and replacing the dilapidated screens.
- Adding Bluestone pavers on the existing concrete slab.
- Repairing the dilapidated balusters on the South face of the Porch.

## **Replacing the Exterior Skylights over the Solarium and Third Floor Hall**

Based on visual inspection and physical operation, we are proposing the following changes within these areas:

- Removal of the existing green metal cage and plywood covers over the Solarium skylights. We will replace them with new safety glass skylights from





Velux. New curbs will be created, as required, and copper flashing will be installed to match the existing roofing material. No changes will occur to the interior stained glass decorative panels.

- Removal of the existing skylights over the third floor hall. We will replace them with new safety glass skylights from Velux. New curbs will be created, as required, and copper flashing will be installed. No changes will occur to the interior glass panels.

### **Replacing / Repairing Exterior Doors and Windows**

Due to existing damage to nearly all exterior doors and many of the windows, the lack of thermal efficiency to the existing glazing, no insulation in the weight pockets of 133 windows, and the need for special security precautions require us to replace the existing doors and windows.

Nearly all of the windows on the Lower Level and Third Floor need replacement due to disrepair, thermal inefficiency and lack of security. The sills on the lower level windows have deteriorated due to rot and pest infiltration. The Third Floor windows appear to not be original. Worker's markings in the metal sash slips are not consistent with the other windows in the house. In addition, water infiltration via the North facing windows has caused severe damage to the wood floors in one of the bedrooms, so much so that it will require them to be totally replaced.

The owners hired a private home performance consultant to do an analysis of the home, (see report). Of the 12 windows that were randomly selected throughout the house, all twelve showed major thermal flaws and were recommended to be replaced with more efficient units. Currently, the owners are spending on average \$3,000 per month to heat the home. By replacing the inefficient window and doors and adding appropriate insulation, we can expect to cut that cost to under \$1,000 per month, saving not only money but damage to the environment via carbon emissions.

The majority of the exterior doors on the home are in serious disrepair and are a major security risk for the owners. The home was already broken into right after they acquired the property this past fall. The intruders caused major damage to the Lower Level of the home and psyche of the new owners. In particular, the front door panel was replaced at some point with veneered plywood. This modification is not original to the home and is not in character with the spirit of Whitney's vision. We would like to bring that vision back, while enhancing the security of the front entry with safety glazing and a replica of the original decorative metalwork.



The owners have also hired a security consultant, Aaron Andrusko, to review the state of the existing home and recommend enhancements for the family's safety. His recommendation for the exterior doors and windows was safety/impact glazing that prevents shattering. This type of enhancement can't be added in "the field", rather it must be applied during fabrication. Marvin Windows has such a glazing product, which we received an estimate for, (see attached). The cost of replacement vs. repair is nearly twice the cost, however the price for keeping the owners family safe is invaluable.

Based on visual inspection, physical operation, a professional energy assessment, a professional security assessment, we are proposing the following changes:

- Replacing the front door to match the original design of wood frame and glass panel with a decorative metal grill. The original glass and metal have been removed, however we have the matching metal rail adjacent to the door. We will match the original design, (see orig. front elevation sheet).
- Replacing the Lower Level exterior door in the octangular bay with a new wood frame/ glass panel security door that matches the design in the original documents. The current door is painted green plywood.
- Replacing the exterior door at the Solarium with a new wood frame/ glass panel security door that matches the design in the original documents. The current door has a rotting sill and frame and malfunctioning hardware.
- Replacing the exterior doors at the Kitchen Pantry and Porch with a new wood frame/ glass panel security door. The current door to the Porch is not original to the home and was installed when the Screen Porch was added before 1925.
- Replacing the exterior French doors at the Dining Room / Screen Porch with new wood frame/ glass panel security doors that match the existing design. The current door set is not original to the home and was installed when the Screen Porch was added before 1925.
- Replacing all of the Third Floor windows. Neglect and poor previous repairs have left nearly all windows leaking water. Airflow can be felt around the window sashes and thermal inspection shows massive air leakage. We are proposing replacing the current units with custom sized (to match) windows manufactured by Marvin Windows of Warroad, MN. Each unit will be wood framed, Authentic Divided Lites (ADL) with safety glass for security purposes.
- Repairing the metal framed windows at the Stair Landing. Two of the existing pains have been severely damaged and need replacement. We propose to repair the damage and install a 3mm safety film over all the pains of the eight units in that area. This will require the units to be removed, reconditioned and reinstalled.
- Replacing the Second Floor windows with custom sized (to match) windows manufactured by Marvin Windows of Warroad, MN. Each unit will be wood framed, Authentic Divided Lites (ADL) with safety glass for security purposes.



Windows at the Servant's Stair are only inches above the stair landing and will need to have tempered safety glass. Windows at Bedroom #3 are not original to the home and were added during the addition to the Dining Room.

- Replacing the Dining Room windows with custom sized (to match) windows manufactured by Marvin Windows of Warroad, MN. Each unit will be wood framed, Authentic Divided Lites (ADL) with safety glass for security purposes. These windows are not original to the home and were added during the addition to the Dining Room.
- Replacing all First Floor double hung units with custom sized (to match) windows manufactured by Marvin Windows of Warroad, MN. Each unit will be wood framed, Authentic Divided Lites (ADL) with safety glass for security purposes and added thermal efficiency.





Front Elevation



East Elevation





South-West Elevation





South-East Elevation





Mismatched roof addition & modification

Porch Elevation



Basement Access





Screen Porch Interior Downspout



Kitchen Screen Porch





Kitchen Screen Porch





Kitchen Screen Porch Balusters



Solarium Skylight Covers





Solarium Skylight Covers





Front Door





Matching Ironwork at Front Door



Lower Level Exterior Door





Solarium Exterior Door Sill Rot



Solarium Exterior Door Rot





Lower Level Window Sill Rot



Second Floor Window Rot and Repair





Previous Lower Level Window Repair

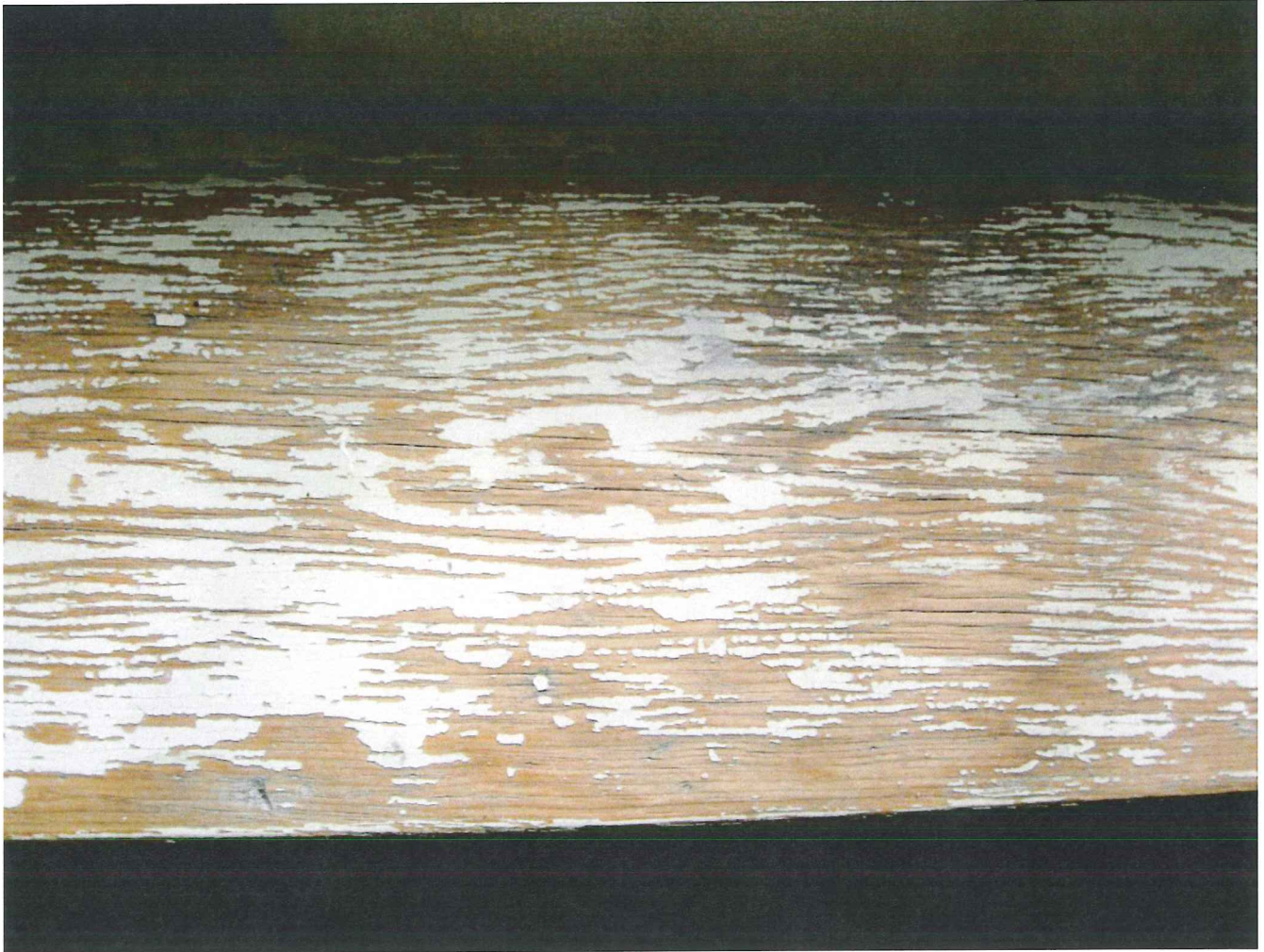


Second Floor Bathroom Window Water  
Damage





Stair Landing Window Damage



Typical Condensation Damage





Living Room Window Mismatched Repair



Metal glide indicated previous replacement



Faulty Repair to Previous Replacement Window (Third Floor)